Bibliographical Notes on well known Plants.—I.

By Edward L. Greene.

Linnæa borealis, Linn. Spec. Pl., 631.

Beginners in botanical study are content with knowing that this or that species is called by a certain double name, as for example, *Linnæa borealis*. More advanced students in systematic botany become aware of the existence of such rather troublesome affairs as synonyms; or, that very many well-known species have been placed under one generic name by one author, and under another by another author, until many of them have as many generic names as they have petals or stamens. At this stage of his progress the learner's eyes are opened to see the advantage, if not indeed the necessity, of appending to that binary name of a plant which is adopted, the name of the author of that name.

But to the professional botanist synonyms are not altogether an annoyance. That our little rue anemone, which Linnæus called *Anemone thalictroides*, received three other generic names within much less than a century after Linnæus, is a fact very significant and instructive. And that large class of facts of which this is but a ready example, indicates, first: that the system of botanical classification which has been in slow process of evolution since centuries before Linnæus even, is still very far from perfect; and secondly, each different generic place which any species may have been assigned to, becomes valuable as an expression of the individual opinion of the author who placed it there, regarding its affinities and its place in the system of plants. Therefore any treatise upon even local systematic botany which fails to present a full synonmy, however useful it may be to beginners, is unsatisfactory to the thorough botanist; for he desires to know not only what the present writer thinks, but what others have thought about the species.

The beautiful *Linnæa borealis*, whose book-history I have chosen here to remark upon, has no long list of synonyms to be appended to it. And yet this plant was well known to botanists for more than a hundred years before Linnæus, but by a very different name from this, which was given to it in the middle of the last century. It was first named, described and figured by Casper Bauhin in his Prodromus Theatri Botanici, published in

the year 1620; and the binary name which he gave it was *Campanula serpillifolia.*

We have all, in our earlier days, been gravely told by learned instructors that before Linnæus there was no such thing as a binomial nomenclature; that the earlier writers gave to each species a descriptive phrase, short or long, which served the double purpose of a name and a definition of the species. There was a good deal of truth in that statement, and nearly as much falsity in it, too. Bauhin's works, no less than those of his contemporaries, and even of authors a century earlier, fairly abound in these double names, followed by full and often very accurate specific characters. Very numerous, indeed, are the binary names now in use, and credited to Linnæus, which were in honest truth given to those species by even Bock or by Dodoens two hundred years before the splendid appearing of that Northern Light. So in the case of the earliest publication of the plant before us. Bauhin's scholarly page is headed by a very tolerable wood-cut representing it entire, from root to flower. Then comes the name *Campanula serpillifolia*, followed by a complete description in some fifteen lines, or, to be precise, of ninety-seven Latin words; then, just as any careful and appreciative author of a new species in our own time would do, he tells all he knows concerning its habitat: "A branch of this plant I had first from my brother;* afterwards we collected it in flower on Monte Baldo; then M. Paschal, the Frenchman, obtained it growing on rocks in the Tyrol." Nor does he conclude this charming account without appending a final paragraph, evidently relating to some different plant, but which, for its curiosity, I cannot forbear translating here: "A similar plant, with leaves whitish beneath and pale green above, native of the island of Toupinambo, in Brazil, Burserus has communicated to me."

So much for the original discovery, naming and publishing of one of the loveliest plants of the northern hemisphere; and under this name the plant was taken up by a number of Bauhin's botanical successors; for example: Ray (1686), Tournefort (1700), Scheuchzer (1703); but there was not a universal consensus of opinion that it had been correctly referred to the genus

* The celebrated Johann Bauhin, no doubt.

Campanula, and Bartholini (1673), Petiver (1695), Plukenet (1696), and several other eminent authorities of the time, placed it in what is now known as *Lysimachia*, then called *Nummularia;* and with this class of botanical opinionists it stood as *Nummularia Norvegica*, the plant having been re-discovered in Norway, where it is abundant.

And so the fate of being placed by some authors in one genus, and by others in another, which has befallen so great a number of generic types in later times, befell *Linnæa*, too, in its earlier days; nor was Gronovius the first to found a new genus upon it; neither was *Linnæa* its first proper generic name, for as early as the year 1728, while the boy Linnæus was in the beginning of his college course at Lund, Buxbaum, of St. Petersburg, published it as a new genus under the name (not well formed for a generic one), *Serpyllifolia.* Then again, eight years later, Siegesbeck reasserted its generic rank, and named it, very appropriately, *Obolaria*, and this was the year preceding the appearance of the third generic name, *Linnæa*, which now holds.

It may be presumed that the genius of the illustrious Swede had recognized the fitness of the plant for a clear and strong generic type, and that his own good taste and rising ambition had combined to kindle within him a desire to have it go down to future ages under the name of *Linnæa*, and that his friend Gronovius was found ready and glad to assume the office of sponsorship. At all events, in Linnæus' Genera Plantarum (1737), the name appears, and he gives Gronovius credit for the authorship, although that author never otherwise published it. Linnæus always used almost absolute freedom with generic names which had been in use before him, rejecting many, and making new applications of many more. The first one which had been proposed for the genus in question he, with reason, put aside. The second, namely, *Obolaria*, he applied to the little North American gentianaceous plant which still bears the name.

With regard to the authority for the specific name, or, if you like, the whole binary name of this plant, our American books every one, in so far as I have observed, and those of many and distinguished European authors also, are at fault in reading as they do *Linnæa borealis*, Gronovius. Gronovius named the

genus, but he did not name the species; that was done by Linnæus, who so designated it in the first edition of the Species Plantarum; and he always cited Gronovius for *Linnæa*, and himself for *Linnæa borealis;* but among later authors of acknowledged erudition, a majority commit the error named. I cannot find the shadow of a fact in all the range of the earlier bibliography to excuse it.

I would remark, finally, that Linnæus, in first publishing the species, cites faithfully *Campanula serpillifolia*, Bauhin, as the oldest synonym, and it was by this name that he must have known the plant from those days of his youth when he began the studies which were to culminate in making him the great Nomenclator.

Some Morphological Notes on Caulophyllum thalictroides.

Dr. Asa Gray, in his Manual, describes the genus *Caulophyllum* as "sending up in early spring a simple and naked stem, terminated by a small raceme or panicle of yellowish-green flowers, and, a little below, bearing a large triternately compound leaf, without any common petiole," And under the specific description of *C. thalictroides*, Michx., he adds: "a smaller biternate leaf often at the base of the panicle." This plant is quite common in Ohio, and the smaller leaf here referred to seems to be a constant feature; even a third leaf is occasionally added. It is also not uncommon to see the lowest leaf with a common petiole nine or ten millimetres in length, and the smallest leaf divided once ternately, with only the middle lobe divided ternately again. The inflorescence may be characterized as consisting of a terminal panicle with a smaller panicle or raceme a slight distance below the same in the axil of the smallest leaf. It is not rare to find a third small panicle or raceme in the axil of the larger leaf, or even in the axil of all three leaves if they are developed. The existence of these forms does not indicate that our learned author has been caught napping, but serves to show that great variations exist which cannot always be taken into account in a condensed work intended for the school-room. But they may also serve to show another and perhaps more important truth. Many students of botany believe that plants did not always exist in the form in which they